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July 11, 1989

Mr. A. Bert Davis
Regional Administrator
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: LaSalle County Station Units 1 and 2
Supplemental Response to Inspection
Report Nos. 50-373/89027 and 50-374/87026
Fire Brigade Response Time
NRC Docket Nos. 50-373 and 50-374

Reference (a): W.E. Morgan letter to A.B. Davis dated
April 28, 1989

Dear Mr. Davis:

Reference (a) provided an evaluation which identified areas at Commonwealth Edison's LaSalle County Station which would require immediate assembly of the station fire brigade upon receipt of a fire alarm in the control room. This action was to be done on an interim basis until a more in-deptn analysis was completed, reviewed and approved by the NRC. The following attachment provides this in-depth analysis.

Based on the results of the attached analysis some areas at the LaSalle Station require immediate assembly of the fire brigade upon receipt of a fire alarm in the Control Room during certain plant operating conditions. During such conditions safe shutdown capabilities may become "vulnerable" (when the alternate safe shutdown method independent of the zone is unavailable and the applicable unit is in power operation) to a single fire.

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Attachments A and B provide the Unit 1 and Unit 2 fire zones when they are vulnerable, that LaSalle Station will commit to require immediate assembly of the fire brigade upon receipt of a fire alarm in the control room. This does not apply when alternate safe shutdown equipment is technically OOS/Inop for planned maintenance or surveillance testing. During these periods, the alternate safe shutdown method could be readily restored if required.

Attachment C identifies the Safe Shutdown Systems and corresponding Technical Specification Action Statements that will constitute the above mentioned actions. Administrative controls to implement this commitment will be established by August 31, 1989.

If you have any further questions regarding this matter, please direct them to this office.

Very truly yours,

Wayne E Morgan

W. E. Morgan
Nuclear Licensing Administrator

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Attachments

cc: Region III Inspector - LSCS
P.C. Shemanski - Project Manager, NRR
D. Kubicki - NRR
J. Ullie - Region III

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LASALLE COUNTY STATION FIRE BRIGADE ASSEMBLY ANALYSIS

INDEX

ATTACHMENTS

LASALLE COUNTY STATION FIRE BRIGADE ASSEMBLY ANALYSIS

A. PURPOSE

The purpose of this analysis is to identify plant operating conditions during which safe shutdown capability may become vulnerable to a single fire, therefore warranting the immediate assembly of the fire brigade upon receipt of a fire alarm in the control room.

B. REFERENCES

1. 10 CFR 50, Appendix R.

2. July 20, 1988 letter from G. H. Holahan (NRR) to H. J. Miller (NRC Region III) concerning request for technical assistance-clarification of NRC position covering timeliness of fire brigade response.

3. LaSalle Fire Protection Documentation Package:

   a. Updated Final Safety Analysis Report
   b. Historical Volume
   c. Fire Hazards Analysis
   d. Safe Shutdown Report
   e. Safety Evaluation Reports (Original and Supplements)

4. The November 3, 1981 letter from L. O. DelGeorge to A. Schwencer.

5. The "LaSalle County Station Fire Brigade Assembly Interim Evaluation", dated April 28, 1989.

6. April 28, 1989 letter from W. E. Morgan (CECo) to A. B. Davis (NRC Region III).

C. METHODOLOGY

1. Only those fire zones and sub-zones which contain essential safe shutdown components (components and cables of the primary and alternate safe shutdown methods as described in the Safe Shutdown Report) have been analyzed. Delayed fire brigade response in all other plant areas is not considered significant from a fire protection standpoint. No safe shutdown division would be affected. Therefore, permitting a plant operator to respond first to an alarm in these areas is acceptable during all plant conditions.

2. A fire zone or sub-zone is considered "vulnerable" when the alternate safe shutdown method independent of that zone is unavailable and the applicable Unit is running.

a. When a fire zone or sub-zone is vulnerable, a fire in that zone could potentially threaten safe shutdown capability, therefore immediate assembly by the fire brigade upon receipt of a fire alarm in the control room for that zone is warranted.

3. Credit has been taken for previous analysis and evaluations performed in the documents referenced in section B.3 of this report. All areas that contain significant fire hazards, regardless of whether or not they represent a threat to safe shutdown capability, have been previously analyzed and protected accordingly.

D. ANALYSIS METHOD

1. The steps outlined below were used in identifying plant operating conditions during which safe shutdown capability may become vulnerable to a single fire:

a. The safe shutdown method which could be adversely effected by a single fire for each fire zone/sub-zone was identified.

b. The alternate safe shutdown method which would need to be utilized for each fire zone/sub-zone was identified.

c. A comparison study of these safe shutdown methods versus plant Technical Specification Limiting Conditions for Operation (LCO's) was performed to identify "vulnerable" plant operating conditions which could exist when the Unit(s) is running.

E. ANALYSIS

The results of the method outlined above were tabulated and are shown in Attachments A and B.

F. LIMITATIONS AND ACTIONS

1. This analysis is a supplement to, but does not supercede, the "LaSalle County Station Fire Brigade Assembly Interim Evaluation" dated April 28, 1989. The recommendations from the April 28, 1989 evaluation should continue to be implemented.

2. Fire zones 2G, 4F1, 7A3, 7B3, 7B6, 7C3 and 7C6 are fire zones in Unit 1 that contain cables which are necessary for operation of Diesel Generator "0" which feeds electrical Div 1 in Unit 2. A fire in these zones could affect Unit 2 RCIC, ADS Div 1, and RHR Loop A. HPCS, ADS Div 2, and RHR Loop B comprise the alternate safe shutdown method for Unit 2 independent of these zones. Therefore zones 2G, 4F1, 7A3, 7B3, 7B6, 7C3 and 7C6 are included in the appropriate sections of the Unit 2 assembly requirements.

3. The recommendations in this analysis do not apply when alternate safe shutdown equipment is technically OOS/Inop for planned maintenance or surveillance testing. During these periods the alternate safe shutdown method could be readily restored if required.

4. The recommendations in the analysis do apply when an alternate safe shutdown system is declared inoperable and an unplanned entry into its Technical Specification time clock is made, including an unplanned time clock entry due to an inoperable back-up diesel generator.

ATTACHMENT A

UNIT 1 FIRE ZONES CONTAINING SAFE SHUTDOWN RELATED EQUIPMENT AND CORRESPONDING DETECTION ZONES

Fire Zone	Location		Detection Zone
2B1	820'	Reactor Building	1-24
2D	786'	Reactor Building	1-36,1-37
2E-1	761'	Reactor Building	1-34
2E-2	761'	Reactor Building	1-35
2F-1	740'	Reactor Building	1-17
2F-2	740'	Reactor Building	1-17p
*2G-1	710'	Reactor Building	1-22
*2G-2	710'	Reactor Building	1-22p
2H1-1	694'	Reactor Building	1-32
2H1-2	694'	Reactor Building	1-33
2H4	694'	Reactor Building	1-33
2H5	694'	Reactor Building	1-33
2I1-1	673'	Reactor Building	1-30
2I1-2	673'	Reactor Building	1-31
2I2	673'	Reactor Building	1-30
2I3	673'	Reactor Building	1-30
2I4	673'	Reactor Building	1-31
2I5	673'	Reactor Building	1-31
4C1	768'	Control Room	1-5
4C2	768'	Auxiliary Building	1-39
4D1-1	749'	Auxiliary Building	Water Flow Alarm
4D1-2	749'	Auxiliary Building	Water Flow Alarm
4D3	749'	Auxiliary Building	1-12
4E1-1	731'	AEER	1-27
4E1-2	731'	AEER	1-27
4E3-1	731'	Auxiliary Building	1-8
4E3-2	731'	Auxiliary Building	1-8
*4F1	710'	Auxiliary Building	1-9
*4F3	710'	Auxiliary Building	Water Flow Alarm
5A4	749'	Cable Tunnel Area	1-18
5D1	687'	HPCS Switch Gear Room	1-10
7A1	731'	HPCS DG Vent Room	1-29
7A2	731'	Div 2 DG Vent Room	1-29
*7A3	731'	Div 1 DG Vent Room	1-29
7B1	710	HPCS DG Room	Heat Det/CO_2 System
7B2	710'	Div 2 DG Room	Heat Det/CO_2 System
*7B3	710'	Div 1 DG Room	Heat Det/CO_2 System
7B4	710'	HPCS Day Tank Room	Water Flow Alarm
7B5	710'	Div 2 DG Day Tank	Water Flow Alarm
*7B6	710'	Div 1 DG Day Tank	Water Flow Alarm
7C1	674'	HPCS DG Fuel Tank	Water Flow Alarm
7C2	674'	Div 2 DG Fuel Tank	Water Flow Alarm
*7C3	674'	Div 1 DG Fuel Tank	Water Flow Alarm
7C4	674'	HPCS DG Pump Room	1-28
7C5	674'	Div 2 RHR WS Pump	1-28
*7C6	674'	Div 1 RHR WS Pump	1-28

* Indicates zone contains Unit 2 Safe Shutdown Equipment

ATTACHMENT B

UNIT 2 FIRE ZONES CONTAINING SAFE SHUTDOWN RELATED EQUIPMENT AND CORRESPONDING DETECTION ZONES

Fire Zone	Location		Detection Zone
3B1	820'	Reactor Building	2-24
3D	786'	Reactor Building	2-36,2-37
3E-1	761'	Reactor Building	2-34
3E-2	761'	Reactor Building	2-35
3F-1	740'	Reactor Building	2-17
3F-2	740'	Reactor Building	2-17p
3G-1	710'	Reactor Building	2-22
3H1-1	694'	Reactor Building	2-32
3H1-2	694'	Reactor Building	2-33
3H4	694'	Reactor Building	2-33
3H5	694'	Reactor Building	2-33
3I1-1	673'	Reactor Building	2-30
3I1-2	673'	Reactor Building	2-31
3I2	673'	Reactor Building	2-30
3I3	673'	Reactor Building	2-30
3I4	673'	Reactor Building	2-31
3I5	673'	Reactor Building	2-31
4C3	768'	Auxiliary Building	2-39
4D2	749'	Auxiliary Building	Water Flow Alarm
4D4	749'	Auxiliary Building	2-12
4E2-1	731'	AEER	2-27
4E2-2	731'	AEER	2-27
4E4-1	731'	Auxiliary Building	2-8
4E4-2	731'	Auxiliary Building	2-8
4F2	710'	Auxiliary Building	2-9
4F3	710'	Auxiliary Building	Water Flow Alarm
5D2	687'	HPCS Switch Gear Room	2-10
8A1	731'	HPCS DG Vent Room	2-29
8A2	731'	Div 2 DG Vent Room	2-29
8B1	710'	HPCS DG Room	Heat Det/CO_2
8B2	710'	Div 2 DG Room	Heat Det/CO_2
8B3	710'	HPCS Day Tank Room	Water Flow Alarm
8B4	710'	Div 2 DG Day Tank	Water Flow Alarm
8C1	674'	HPCS DG Fuel Tank	Water Flow Alarm
8C2	674'	Div 2 DG Fuel Tank	Water Flow Alarm
8C3	674'	HPCS Diesel Pump Room	2-28
8C4	674'	Div 2 RHR WS Pump Room	2-28
8C5	674'	Div RHR WS Pump Room	2-28

ATTACHMENT C

SYSTEM	TECH SPEC #	ACTION STATEMENT
HPCS	3.5.1.c.1	With ECCS division 3 inoperable, restore the inoperable division to OPERABLE status within 14 days (provided RCIC and ECCS Div 1 and 2 are OPERABLE).
	3.5.1.c.2	Otherwise, be in at least HOT SHUTDOWN within the next 12 hours . . . .
RCIC	3.7.3.b	With the RCIC system inoperable, operation may continue provided the HPCS system is OPERABLE; restore RCIC system OPERABLE status within 14 days or be in at least HOT SHUTDOWN within 12 hours . . . .
ADS 1&2	3.5.1.e.2	With two or more of the required ADS valves inoperable, be in at least HOT SHUTDOWN within the next 12 hours . . . .
RHR A	3.5.1.a.2	With the LPCI sub-system "A" inoperable, restore the inoperable LPCI sub-system "A" to OPERABLE status within 7 days.
	3.5.1.a.3	With the LPCS system inoperable and LPCI sub-system "A" inoperable, restore at least the inoperable LPCI sub-system "A" or the inoperable LPCS system to OPERABLE status within 72 hours.
	3.5.1.a.4	Otherwise, be in a least HOT SHUTDOWN within the next 12 hours and COLD SHUTDOWN within the following 24 hours.
RHR B	3.5.1.b.1	With either LPCI sub-system "B" or "C" inoperable, restore the inoperable LPCI sub-system "B" or "C" to OPERABLE status within 7 days.
	3.5.1.b.2	With both LPCI sub-systems "B" and "C" inoperable, restore at least the inoperable LPCI "B" or "C" system to OPERABLE status within 72 hours.
	3.5.1.b.3	Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and COLD SHUTDOWN within the following 24 hours.
RHR A&B	3.5.1.d.1	With the LPCI sub-system "A" and either LPCI sub-system "B" or "C" inoperable, restore at least the inoperable LPCI sub-system "A" or inoperable LPCI sub-system "B".